

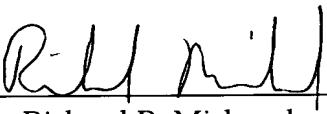
REMARKS

Applicants enclose Substitute specification Pages 1 and 1a as now amended and a marked-up version showing the changes made to the specification.

The above amendments are being presented to include the cross-reference to related application information in the present application.

Should the Examiner have any questions regarding the present application, Applicants respectfully request that the Examiner contact Applicants' representative at the phone number listed below. While Applicants believe that no fees are due with the submission of this Preliminary Amendment, please charge any deficiencies in fees to Deposit Account No. 503342.

Respectfully submitted,

By 
Richard R. Michaud
Registration No. 40,088
Attorney for Applicants

Michaud-Duffy Group LLP
CenterPoint
306 Industrial Park Road
Suite 206
Middletown, CT 06457-1532
Tel: (860) 632-7200
Fax: (860) 632-8269

LENS APPARATUS
DESCRIPTION

LENS APPARATUS

Cross-Reference to Related Applications

5 This application is entitled to the benefit of
and incorporates by reference essential subject matter
disclosed in International Application No.
PCT/JP2003/009016 filed on July 7, 2003 and Japanese
Patent Application No. 2002-209547 filed on July 18,
10 2002.

Technical Field

15 This invention generally relates to a lens device,
and more particularly, to a lightweight and small-sized
lens apparatus that can be mounted on a portable
computer, a mobile telephone, or the like.

Background Art

20 Conventionally, small-sized and lightweight lens
apparatuses that are mounted on super compact cameras,
mobile telephones, and the like are disclosed in
Japanese Patent Application Publication No. 4-211215
and Japanese Patent Application Publication No. 6-
88939. Each of the above-mentioned lens apparatuses is
25 composed of one or two lenses. However, peripherals of
the image are greatly deteriorated in quality, and
accordingly, a satisfactory image quality cannot be
obtained when the above-mentioned lens apparatus is
employed in an image sensor for taking an image having
30 a large number of pixels, more than one million pixels.

Generally, five or six lenses were required to
obtain a sufficient resolution as a lens apparatus in
use for a one-quarter-size image sensor, which is used
for taking the image having one to two million pixels.
35 It was thus difficult to downsize and reduce weight.

In addition, in the case where a field angle is wide, 50 degrees or more, it has extremely been difficult to correct distortion aberration or color aberration or coma aberration in the peripherals of the
5 image.

Disclosure of the Invention

It is a general object of the present invention to provide a lens apparatus that is capable of solving
10 the above-mentioned drawbacks.